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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,813	01/28/2002	Daniel E. Smith	3128.1003-002	3175

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EXAMINER

COLILLA, DANIEL JAMES

ART UNIT PAPER NUMBER

2854

DATE MAILED: 04/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,813

Applicant(s)

SMITH, DANIEL E.

Examiner

Dan Colilla

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2002 and 10 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15 is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 97 (as mentioned on page 8, line 22 of the specification). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The use of the trademark TEFLON has been noted in this application (on page 7, line 17). It should be capitalized wherever it appears (i.e. every letter capitalized) and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

Claim Objections

3. Claims 1-15 and 21-25 are objected to because of the following informalities:

In claims 1, 15, 20 and 21, applicant recites, "excess ink which is deposited on the substrate form accumulating underneath the substrate." It does not appear that ink can be both deposited on the substrate and underneath the substrate.

Appropriate correction is required.

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4. Claims 5 and 8 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In claims 5 and 9 applicant has not recited any further structure to limit the claim. Instead applicant has functionally recited a desired result without the positive recitation of structure to achieve that result.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1-2, 5 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugimoto et al.

With respect to claim 1, Sugimoto et al. discloses a printing system including a web guide 46, a preprinting section 32,36, a postprinting section 34,38, and a printing section 20,40 which includes a removable platen 40 as shown in Figures 2-3 of Sugimoto et al.

With respect to claim 2, the platen 40 has a flat upper surface.

With respect to claim 5, Sugimoto et al. discloses a heater 52 for heating the platen 40.

With respect to claim 12, the area formed when the platen 40 is removed could be considered a trough.

7. Claims 16-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Rhodes.

With respect to claim 16, Rhodes discloses a method of guiding a substrate including the steps of guiding the substrate 16 through a preprinting section between rollers 42 and 48 as shown in Figure 1 and applying a tension to the substrate 16 with belt 32 and rollers 42 and 44. Rhodes further discloses the step of applying a vacuum to cavity 50 through the belt 32.

With respect to claim 17, Rhodes discloses a heated platen 29 (Rhodes, col. 3, lines 61-62).

With respect to claims 18-19, Rhodes discloses that separate heaters may be mounted upstream and downstream of the print zone 34 (Rhodes, col. 3, lines 64-66).

8. Claims 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Akaha.

With respect to claim 21, Akaha discloses a method of guiding a substrate including guiding the substrate through a preprinting section 8 and moving the substrate over a gap 11 which catches ink that is not printed on the substrate.

With respect to claim 22, the feeding forces applied by rollers 8 and 9 will apply a tension to the substrate.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Moore et al.

With respect to claim 3, Sugimoto et al. discloses the claimed printing system except for the heating of the preprinting section. However, Moor et al. teaches a preprinting section 104 which includes heater 72 for heating the substrate before it enters the printing section. It would have been obvious to combine the teaching of Moore et al. with the printing system disclosed by Sugimoto et al. for the advantage of conditioning the substrate so that it more readily absorbs printing ink.

With respect to claim 4, Moore et al. teaches that the heater 72 includes resistive trace patterns (Moore et al., col. 41-45).

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Wotton et al. (2002/0071016).

Sugimoto et al. discloses the claimed printing system except that it is not known to the examiner what type of heater is used to heat the platen. However, Wotton et al. teaches that it is known to use heating elements 72 for heating a platen 42 (Wotton et al., page 4, paragraph 61). It would have been obvious to combine the teaching of Wotton et al. with the printing system

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disclosed by Sugimoto et al. for the advantage of the preheating and posting heaters 70 that can carry out preprinting and postprinting operations on the substrate.

12. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Erickson et al.

With respect to claims 7-8, Sugimoto et al. discloses the claimed printing system except for the convex curved postprinting section. However, Erickson et al. teaches a printing system with a convex curved postprinting section 518,516 as shown in Figure 2 of Erickson et al. Portion 516 of this curved surface is a heater. It would have been obvious to combine the teaching of Erickson et al. with the printing system disclosed by Sugimoto et al. for the advantage of improving the bond of the ink to the substrate (Erickson et al., col. 15, lines 31-40).

With respect to claim 9, Erickson et al. teaches that the heating can be provided by resistance heating or any other means known in the art. While a resistance heater could comprise a single element, there is no unobviousness in providing a plurality of known elements in order to carry out the same function.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view Koyama et al.

Sugimoto et al. discloses the claimed system except for the convex curved postprinting section. However, Koyama et al. teaches a printing system with a convex curved postprinting section 14 as shown in Figure 1 of Koyama et al. It would have been obvious to combine the teaching of Koyama et al. with the system disclosed by Sugimoto et al. for the advantage of

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providing a surface that is less likely to stress the printing medium as it is rewound onto roller

44.

14. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Spehrley, Jr. et al.

With respect to claim 10, Sugimoto et al. discloses the claimed printing system except for the vacuum source. However, Spehrley, Jr. et al. teaches a printing system with a vacuum source 21 for generating a suction of the substrate 10 as shown in Figure 2 of Spehrley, Jr. et al. It would have been obvious to combine the teaching of Spehrley, Jr. et al. with the printing system disclosed by Sugimoto et al. for the advantage of preventing the substrate from being moved out of the printing plane.

With respect to claim 11, Sugimoto et al. discloses a first slot and second slot in the preprinting and postprinting sections respectively as shown in Figure 2 of Sugimoto et al. When combined with Spehrley, Jr. et al., the vacuum source would draw air from these slots.

15. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Akaha.

With respect to claims 13-14, Sugimoto et al. discloses the claimed printing system except for the drain. However, Akaha teaches a printing system with a drain 15 that absorbs ink as shown in Figure 7 of Akaha. It appears that these terms are broad enough such that both can be applied to absorber 15. It would have been obvious to combine the teaching of Akaha with

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the printing system disclosed by Sugimoto et al. for the advantage of ridding the printing area of excess ink that could potentially smear the printing substrate.

16. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sugimoto et al. in view of Morita.

Sugimoto et al. discloses the claimed method except for the step of applying a vacuum to the substrate. Sugimoto et al. discloses guiding a substrate 22 through a preprinting section defined by rollers 32 and 36 and applying a tension to the substrate 22 through the feed rollers 36 and 38 cooperating with the pressure rollers 32 and 34 as shown in Figure 2 of Sugimoto et al. Figure 3 of Sugimoto et al. shows the step of removing a platen from the printing section forming a gap below the substrate 22. Morita teaches a method of guiding a substrate including the step of applying a vacuum to the substrate with a fan 128. It would have been obvious to combine the teaching of Morita with the method of guiding a substrate disclosed by Sugimoto et al. for the advantage of preventing the substrate from lifting off of the platen.

17. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akaha in view of Shida.

Akaha discloses the claimed method of guiding a substrate except for the step of heating the substrate in the printing section. However, Shida teaches guiding a substrate through a printing system which includes the step of heating the substrate 10 with heater 6 located below the printhead 30 as shown in Figure 1 of Shida. It would have been obvious to combine the

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teaching of Shida with the method of guiding a substrate disclosed by Akaha for the advantage of drying the printing ink so that it does not smear on the substrate.

18. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akaha in view of Szlucha et al.

With respect to claim 23, Akaha discloses the claimed method of guiding a substrate except for the step of heating the substrate before printing. However, Szlucha et al. teaches heating a substrate 16 with a pre-heating section 52 of heater 50 before printing as shown in Figure 1 of Szlucha et al. It would have been obvious to combine the teaching of Szlucha et al. with the method of guiding a substrate disclosed by Akaha for the advantage or pre-conditioning the substrate for receiving ink (Szlucha et al., col. 2, lines 1-14).

With respect to claims 24-25, the heater 50 disclosed by Szlucha et al. heats the substrate as it passes under the printhead and in the sheet feed path after the printhead as shown in Figure 1 of Szlucha et al.

Allowable Subject Matter

19. Claim 15 is allowed.

20. The following is a statement of reasons for the indication of allowable subject matter:

Claim 15 has been indicated as containing allowable subject matter because the prior art of record does not disclose or teach in combination the entire combination of a printing system including a substantially flat, preprinting system with heating elements, a convexly curved

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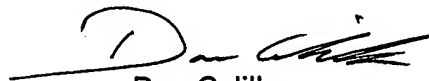
postprinting section having heating elements, and a printing section having a removable platen for providing a gap connected to a vacuum source.

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Miyasaka et al. is cited to show another example of a printer with a removable platen.

22. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (703) 308-2259. The examiner can normally be reached M-F, 8:30-5:30. Faxes regarding this application can be sent to (703) 746-4405.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (703)305-6619. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

April 3, 2003


Dan Colilla
Primary Examiner
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